culturing, thereby forming arachidonic acid or lipid containing arachidonic acid and recovering arachidonic acid.

- 3. (Amended) The process according to claim 1 [or 2], wherein the microorganism belonging to the genus [Mortierella] Mortierella is a microorganism belonging to subgenus [Mortierella] Mortierella.
- 4. (Amended) The process according to claim 3, wherein the microorganism belonging to subgenus [Mortierella] Mortierella is a microorganism belonging to the species [alliacea] alliacea.
- 7. (Amended) The process for producing arachidonic acid or lipid containing arachidonic acid according to [any one of claims 1 to 6] <u>claim 1</u>, wherein the carbon source concentration at the start of culturing is at least 8% by weight.
- 8. (Amended) A process for producing dihomo- γ -linolenic acid or lipid containing dihomo- γ -linolenic acid comprising the steps of culturing a microorganism belonging to the genus [Mortierella] Mortierella and having a resistance to a carbon source of high concentration in a medium having a carbon source concentration of at least 4% by weight at the start of culturing and containing a $\Delta 5$ denatures inhibitor, thereby forming a dihomo- γ -linolenic acid or lipid containing dihomo- γ -linolenic acid, and recovering dihomo- γ -linolenic acid.

10. (Amended) The process according to claim 8 [or 9], wherein the microorganism belonging to the genus [Mortierella] Mortierella is a microorganism belonging to subgenus [Mortierella] Mortierella.

14. (Amended) The process for producing arachidonic acid or lipid containing dihomo-γ-linolenic acid according to [any one of claims 8 to 13] claim 8, wherein the carbon source concentration at the start of culturing is at least 8% by weight.

15. (Amended) A process for producing eicosapentaenoic acid or lipid containing eicosapentaenoic acid comprising the steps of culturing at temperatures of up to 20°C a microorganism belonging to the genus [Mortierella] Mortierella and having resistance to a carbon source of high concentration in a medium having a carbon source concentration of at least 4% by weight at the start of culturing, thereby forming eicosapentaenoic acid or lipid containing eicosapentaenoic acid and covering eicosapentaenoic acid.

17. (Amended) The process according to claim 15 [or 16], wherein the microorganism belonging to the genus [Mortierella] Mortierella is a microorganism belonging to subgenus [Mortierella] Mortierella.